

## A FOSSIL SIRICIDAE (HYMENOPTERA) FROM ARGENTINA<sup>1</sup>

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**ABSTRACT:** *Urocerus patagonicus*, n. sp., is described from Paleocene shales from Patagonia, Argentina. No living native Siricidae are known from South America, and this is the first fossil Siricidae discovered from this continent.

The discovery of an impression of a specimen of Siricidae in Paleocene shales in Patagonia, Argentina, is unusual because no living Siricidae are native to South America. The southernmost occurrence of living, native Siricidae in the Western Hemisphere is northern Central America which coincides with the southern extent of the northern lineages of conifers. One species, *Urocerus gigas gigas* (L.), has been accidentally introduced into Chile and is apparently established. The Siricidae are practically absent in the Southern Hemisphere except for two species of *Afrotremex* from central Africa and one species of *Eriotremex* from New Guinea, all of which belong in the subfamily Tremecinae. This fossil, however, belongs in the Siricinae, a group that has no living native representatives in the Southern Hemisphere but are associated only with the northern coniferous forests. This discovery indicates that the Siricinae were once much more widespread than they are now.

The impression (Fig. 1) shows part of the head, thorax, base of the abdomen, and most of the forewings. The forewing venation is most consistent with current day species of *Urocerus*.

### *Urocerus patagonicus* Fidalgo and Smith, new species

**Adult.** — Forewing and dorsum of head, thorax, and base of abdomen as in Figs. 1-3. Two apparent anomalies occur, a double anal crossvein (a) in the left forewing and a partial stub of another vein (Rs) in the same wing. These are apparently aberrations since we have seen such irregularities in living species. Important features of the forewing as follows: crossvein 2r-m present; basal stub of vein Cu<sub>1</sub> absent (between M+Cu<sub>1</sub> and 1A); veins Rs and M meet at same point; cell 1R<sub>1</sub> about 2/3 length of cell 2R<sub>1</sub>; basal stub of vein 3A absent; crossvein 2r-m meets Rs far apical to where 2r meets Rs; crossvein 2m-cu meets M apical to where crossvein 2r-m meets M.

**Holotype.** — No. 13320, Paleocene, Patagonia, Argentina: Chubut, Laguna del Hunco, J. Powell coll. Deposited in the collections of Paleontología Invertebrados Lillo, Instituto M. Lillo, Tucumán, Argentina.

<sup>1</sup>Received December 5, 1986. Accepted February 28, 1987

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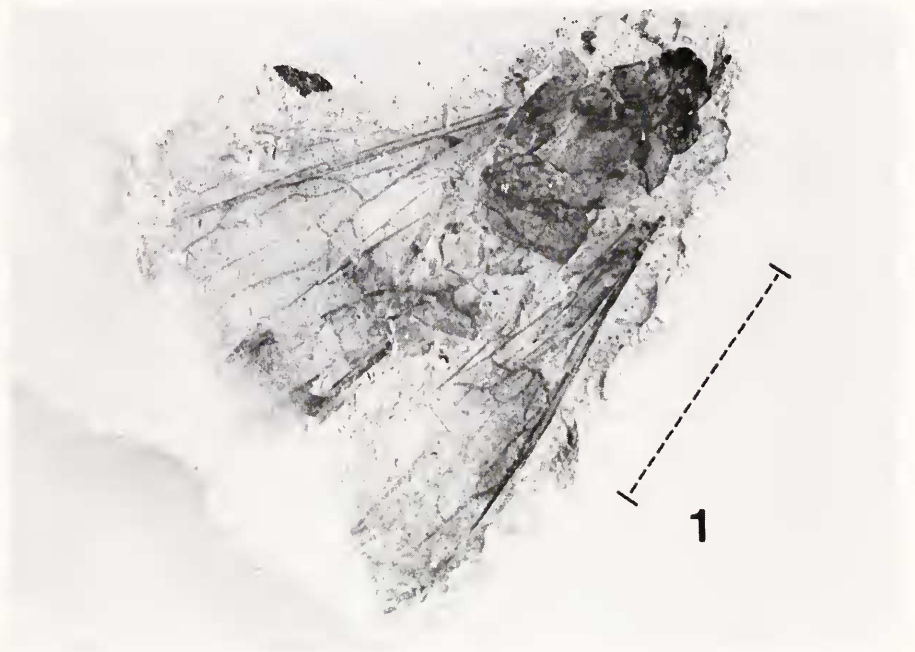
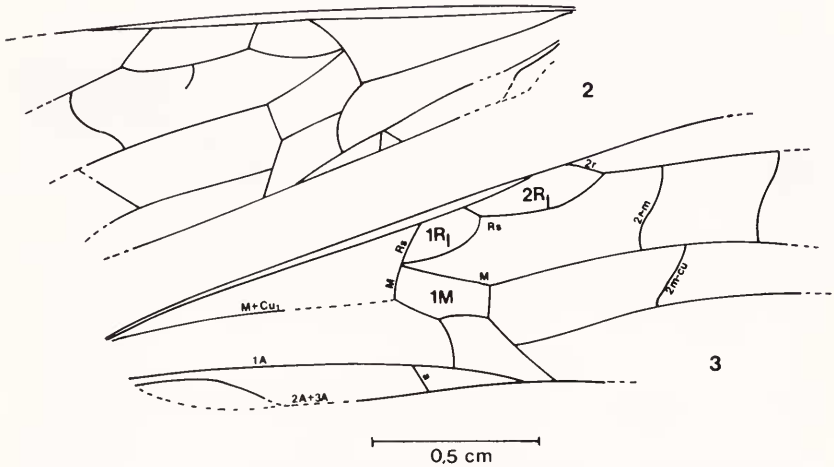


Fig. 1. Photograph of *Urocerus patagonicus* (by Mr. Simon Castro). Actual size indicated.



Figs. 2, 3. Forewings of *Urocerus patagonicus*. 2, Left forewing. 3, right forewing (drawings by PF).

## DISCUSSION

The presence of crossvein 2r-m and lack of the basal stub of vein 3A in the forewing helps to place this species in the Siricinae; Tremecinae usually lack 2r-m and have 3A represented as a short stub issuing basally from 2A+3A near the point where 2A+3A curves up. The fossil most resembles *Urocerus* because of the lack of the basal stub of vein Cu<sub>1</sub> and veins Rs and M meeting at about the same point. In *Sirex*, the basal stub of vein Cu<sub>1</sub> is almost always present, and in *Xeris*, RS usually meets vein M on cell 1M, apical to the point where these veins meet in the fossil. These three genera are widespread in the Holarctic Region. *Xoanon* from east Asia lacks the basal stub of vein Cu<sub>1</sub>, but cell 2R<sub>1</sub> is nearly twice the length of cell 1R<sub>1</sub> and crossvein 2m-cu meets M basal to the point where crossvein 2r-m meets M; and *Siricosoma* from Malaysia has the anal cell of the forewing contracted only in the basal 1/3. Wing venation is usually not significant at the species level in Symphyta, but it includes the only evident characters in most fossil forms. Even though we are unable to differentiate the fossil from current *Urocerus* species, the occurrence of *U. patagonicus* during the Paleocene in an area far removed from where the genus now occurs indicates that it is probably a distinct species.

Several other Siricinae have been described from the Cenozoic (Smith, 1978): *Urocerites spectabilis* Heer (1867) from the Miocene in Yugoslavia; *Eoxeris klebsi* (Brues) (1926) from Baltic amber, Oligocene, in Germany; and *Eosirex ligniticus* Piton (1940) from the Eocene in France. The latter genus and species were overlooked by Smith (1978). All are based on descriptions of the forewing. In *Urocerites* and *Eosirex*, cells 1R<sub>1</sub> and 2R<sub>1</sub> are subequal in length; in *Urocerites* crossvein 2r-m is nearly interstitial with 2r, meeting Rs only slightly apical to 2r; and in *Eoxeris* veins Rs meets M on cell 1M, similar to that in *Xeris*.

There were also undetermined conifer impressions found at Laguna del Hunco (LIL-PB#5970 & 5971 in the Instituto Miguel Lillo collections) (J. Durango de Cabrera, personal communication), indicating that conifers may have been the host of this species. All living Siricinae are associated with conifers.

## ACKNOWLEDGMENTS

We thank David Wahl, American Entomological Institute, Gainesville, Florida; A. Shinohara, University of Osaka Prefecture, Japan; and R.L. Smiley and E.E. Grissell, Systematic Entomology Laboratory, USDA, Beltsville, Maryland, and Washington, D.C., respectively, for reviewing this manuscript.

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## AMENDED INFORMATION: SECOND CONFERENCE ON PARASITIC HYMENOPTERA

Dates changed to November 19-21, 1987

Other information, as presented in the earlier notice on page 30 of the Jan.- Feb. '87 issue of ENT NEWS remains unchanged. For further information, write to: V.K. Gupta, convener, Center for Parasitic Hymenoptera, Univ. of Florida, 3005 S.W. 56th Ave., Gainesville, FL 32608.

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"Endangered and Sensitive Species of the San Joaquin Valley, CA: A Conference on their Biology, Management, and Conservation" will be hosted by Calif. State College, Bakersfield, CA, on December 10-11, 1987.

Papers and poster sessions on endangered and sensitive wildlife and plant species, and unique communities of the San Joaquin Valley are solicited. Presentations should be no more than 15 minutes. Accepted papers will be published in the conference proceedings.

Abstracts (5 copies) should be sent to Daniel F. Williams, Dep't. Biological Sciences, Calif. State Univ., Stanislaus, Turlock, CA 95380 by July 1, 1987.

For additional information, contact Linda K. Spiegel, Calif. Energy Commission, 1516 9th St., MS-40, Sacramento, CA 95814.